

What Is Claimed Is:

1. A printer configured to print on substrates which undesirably tend to collect debris before being printed, comprising:

- a. a print station including a printhead; and
- b. a printer body configured to receive a replaceable cartridge that holds a printer consumable and a substrate cleaning structure, the printer body being constructed and arranged so that when a cartridge is received in the body, the cleaning structure is operable to at least assist in removing debris from a substrate.

2. The printer of claim 1 wherein:

said printhead is a thermal printhead, and wherein said printer consumable comprises a transfer ribbon.

3. The printer of claim 1 wherein:

said cleaning structure presents a tacky or sticky surface.

4. The printer of claim 3 wherein:

said cleaning structure comprises a tacky or sticky belt or web.

5. The printer of claim 3 wherein:

said cleaning structure comprises a tacky or sticky roller.

6. The printer of claim 3 wherein:
said cleaning structure is configured to present a sticky surface to a primary cleaning member which engages and cleans the substrates.

7. The printer of claim 3 wherein:
said cleaning structure is configured to directly engage and clean the substrates.

8. A printer configured to print on substrates which undesirably tend to collect debris before being printed, comprising:

a. a print station including a thermal printhead; and

b. a printer body configured to receive a replaceable cartridge that holds a transfer ribbon and a substrate cleaning belt or roller, the printer body being constructed and arranged so that when a cartridge is received in the body, the belt or roller is operable to at least assist in removing debris from a substrate.

9. A printer configured to print on substrates which undesirably tend to collect debris before being printed, comprising:

- a. a printer body;
- b. within said printer body, a print station including a printhead; and
- c. receivable within said printer body, a replaceable cartridge holding a printer consumable and a substrate cleaning structure; and wherein:

said printer body is constructed and arranged so that when the cartridge is received in the body, the cleaning structure is operable to at least assist in removing debris from a substrate prior to its being printed by said printhead.

10. The printer of claim 9 wherein:

said printhead is a thermal printhead, and wherein:

said printer consumable comprises a transfer ribbon.

11. The printer of claim 9 wherein:

said cleaning structure presents a tacky or sticky surface.

12. The printer of claim 11 wherein:

said cleaning structure comprises a tacky or sticky belt or web.

13. The printer of claim 11 wherein:
said cleaning structure comprises a tacky or sticky roller.

14. The printer of claim 11 wherein:
said cleaning structure is configured to present a sticky surface to a primary cleaning member that engages and cleans the substrates.

15. The printer of claim 11 wherein:
said cleaning structure is configured to directly engage and clean the substrates.

16. A printer for printing information on a surface of a substrate fed through the printer along a substrate feed path, the printer comprising:

a printing mechanism for printing the information on the surface of the substrate;

a substrate cleaning station located along the substrate feed path upstream of the printing mechanism, the substrate cleaning station comprising a first cleaning member positioned to clean the surface of the substrate being fed along the substrate feed path and a second cleaning member positioned to clean the first cleaning member during operation of the printer; and

a cartridge removably attached to the printer, the cartridge carrying (1) a transfer medium adapted to be moved past the printing mechanism, and (2) the second cleaning member, the transfer medium and the second cleaning member being thereby removable from the printer as a unit.

17. The printer of claim 16 in which:

the first cleaning member comprises a first cleaning roller having a tacky outer surface for lifting debris from the surface of the substrate; and

the second cleaning member comprises a second cleaning roller having a sticky outer surface for lifting debris from the surface of the first cleaning roller, the sticking power of the sticky surface of the second cleaning roller being greater than that of the tacky outer surface of the first cleaning roller.

18. The printer of claim 17 in which:

the sticky outer surface of the second cleaning roller is provided by double-sided masking tape carried by said roller.

19. The printer of claim 17 in which:

the diameter of the second roller is greater than the diameter of the first roller.

20. The printer of claim 17 in which:

the outer surface of the first cleaning roller has a circumference equal to the length of the substrate.

21. The printer of claim 17 in which:

the transfer medium comprises a ribbon transportable between ribbon supply and take-up spools rotatable about parallel, transverse axes; and

the second cleaning roller is supported by said cartridge for rotation about a transverse axis parallel with the axes of said spools.

22. The printer of claim 17 in which:
the printer includes a printer frame; and
the first cleaning roller is carried by the
printer frame for vertical movement relative to said
frame.

23. The printer of claim 22 in which:
the first cleaning roller has outer ends, each
outer end being carried within a corresponding vertical
slot in the printer frame.

24. The printer of claim 17 in which:
the second cleaning roller includes outer ends
journaled for rotation on the cartridge.

25. The printer of claim 24 in which:
the second cleaning roller is resiliently
biased to urge the sticky surface thereof into engagement
with the tacky surface of the first cleaning roller.

26. The printer of claim 25 in which;
the second cleaning roller is resiliently
biased by a compression spring coupled to each of the
outer ends of the second cleaning roller.

27. The printer of claim 17 in which:
the region of engagement between the first and
second cleaning rollers is diametrically opposite the
region of engagement between the first cleaning roller
and the surface of the substrate.

28. For use in a printer configured to print on substrates that undesirably tend to collect debris before being printed, a replaceable cartridge that holds a printer consumable and a substrate cleaning structure, the cartridge being configured so that when it is received in a printer it is operable to at least assist in removing debris from a substrate.

29. The replaceable cartridge of claim 28 wherein:
said printer consumable comprises a transfer ribbon.

30. The replaceable cartridge of claim 28 wherein:
said cleaning structure presents a tacky or sticky surface.

31. The replaceable cartridge of claim 30 wherein:
said cleaning structure comprises a tacky or sticky belt or web.

32. The replaceable cartridge of claim 30 wherein:
said cleaning structure comprises a tacky or sticky roller.

33. The replaceable cartridge of claim 30 wherein:
said cleaning structure is configured to present a sticky surface to a primary cleaning member which engages and cleans the substrates.

34. The replaceable cartridge of claim 30 wherein:
said cleaning structure is configured to
directly engage and clean the substrates.

35. The replaceable cartridge of claim 30 wherein:
the useful lives of said cleaning structure and
said printer consumable are commensurate.

36. In a disposable ribbon cartridge for use in a
printer adapted to print information on substrates
transported in succession through said printer, the
cartridge including ribbon supply and take-up spools, the
improvement comprising a sticky cleaning member carried
by the cartridge and disposable therewith, the sticky
member being positioned to engage a tacky cleaning member
mounted on the printer when the cartridge is installed in
the printer.

37. The improvement of claim 36 in which:
the sticky cleaning member comprises a roller
mounted for rotation on the ribbon cartridge.

38. The improvement of claim 37 in which:
the ribbon supply and take-up spools and the
sticky roller are mounted to rotate about parallel axes.

39. The improvement of claim 37 in which:
the sticky roller is resiliently biased to urge
the surface thereof into engagement with the tacky
cleaning member when the ribbon cartridge is installed in
the printer.

40. The improvement of claim 39 in which:
the sticky roller has end shafts; and
the resilient bias of the sticky roller is
provided by a compression spring coupled to each of the
sticky roller end shafts.

41. The improvement of claim 37 in which:
the sticky roller has an outer surface carrying
double-sided masking tape.

42. For use with a printer having a print mechanism
for applying information on a surface of a substrate, a
disposable cartridge carrying a transfer medium adapted
to be moved past the print mechanism when the cartridge
is installed in the printer, the disposable cartridge
carrying a sticky cleaning roller adapted to remove
debris from the surface of a substrate-cleaning member
mounted on the printer.

43. The improvement of claim 42 in which:
the transfer medium comprises a ribbon
transportable between ribbon supply and take-up spools
carried by the cartridge.

44. The improvement of claim 42 in which:
the sticky roller is resiliently biased to urge
the sticky surface thereof into engagement with the
surface of the substrate-cleaning member when the
cartridge is installed in the printer.

45. The improvement of claim 44 in which:

the sticky roller includes outer ends rotatably mounted on the cartridge; and

the resilient bias of the sticky roller is provided by a compression spring coupled to each of the outer ends of the sticky roller.

46. A method of facilitating and assuring cleaning of substrates in a printer, comprising:

a. moving to a print station a succession of substrates that may be undesirably laden with debris;

b. moving through the print station a replaceable consumable transfer medium used in the print station;

c. upstream of the print station, at least assisting in the cleaning of the substrates with a replaceable consumable cleaning structure whose useful life is related to the useful life of the consumable transfer media; and

d. unalterably linking the installation and replacement of the consumable transfer media and the consumable cleaning structure so that they must be installed and replaced together as a unit.

47. The method of claim 46 wherein:

said printer consumable comprises a transfer ribbon.

48. The method of claim 46 wherein:

said cleaning structure presents a tacky or sticky surface.

49. The method of claim 48 wherein:
said cleaning structure comprises a tacky or sticky belt or web.

50. The method of claim 48 wherein:
said cleaning structure comprises a tacky or sticky roller.

51. The method of claim 48 wherein:
said cleaning structure is configured to present a sticky surface to a primary cleaning member that engages and cleans the substrates.

52. The method of claim 48 wherein:
said cleaning structure is configured to directly engage and clean the substrates.

53. The method of claim 46 wherein:
said unalterably linking comprises providing a cartridge that holds the transfer media and supports the cleaning structure.

54. A method of cleaning a substrate-cleaning member of a printer for printing information on substrates transported through the printer, the printer comprising (a) a print mechanism for applying information on said substrates, and (b) a disposable printing medium through which said print mechanism applies said information, the method comprising the steps of:

removing any debris from said card-cleaning member with a disposable sticky member prior to applying said information;

applying information on a succession of said substrates; and

jointly disposing of said sticky member and said printing medium as a unit.